

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

DENNIS MERCURIO and COLLEEN MERCURIO	:	
	:	
	:	
Plaintiffs,	:	
	:	
v.	:	3:16-CV-412
	:	(JUDGE MARIANI)
LOUISVILLE LADDER, INC.	:	
	:	
	:	
Defendant.	:	

MEMORANDUM OPINION

I. INTRODUCTION

This is a products liability action arising from Plaintiff Dennis Mercurio's fall from a stepladder designed and manufactured by Defendant Louisville Ladder, Inc. Mr. Mercurio fell from the ladder while he was attempting to fix a light during the course of his employment. Presently before the Court is Defendant's motion in limine to preclude Plaintiff expert Stephen Fournier. Doc. 20. On May 31, 2018, the Court denied Defendant's motion in limine without prejudice pending a *Daubert* hearing. Doc. 31. On August 1, 2018, the Court conducted a *Daubert* hearing, during which the parties presented arguments and evidence for the record, including live testimony from Fournier. For reasons set forth below, the motion in limine will be denied.

II. STATEMENT OF UNDISPUTED FACTS

The Court assumes the parties' familiarity with the facts and will only recount the facts relevant to the instant motion in limine. On April 29, 2014, Mr. Mercurio fell off an 8

foot fiberglass stepladder while attempting to fix a light during the course of his employment. Doc. 18 ¶ 3. The ladder was manufactured by Defendant and purchased by Mr. Mercurio's employer, Price Brothers Electrical Contractors, prior to the accident. *Id.* ¶ 7. It is an A-frame ladder with a step attached every 12 inches along the rails, and a mid-rail with "spreader braces on each side that allow the ladder to fold." *Id.* ¶ 9. The ladder was intentionally designed with some flexibility (i.e. "racking") to ensure that all four feet of the ladder may be set up "on surfaces that are not completely flat or level." *Id.* ¶ 10.

On the day of the incident, Mr. Mercurio attempted to replace a light above the rear entrance to the Jackson Township Maintenance Building. *Id.* ¶ 17. He set up the rear of the ladder against the building, and climbed on the front to unscrew the light. *Id.* ¶ 28. He climbed back down the steps to take a light out of his truck to determine the drilling needed for the new light. *Id.* ¶ 29. He climbed the ladder a second time and placed the new light on the building, but descended again to retrieve a screw that he dropped. *Id.* ¶¶ 31-32. Mr. Mercurio then ascended the ladder for the third time, and as he was attempting to get the screwdriver from his pocket, he felt the ladder twist to the left under him, and tumbled down the steps with the ladder. *Id.* ¶¶ 33, 36. A key disputed issue in this case is whether Mr. Mercurio was on the third or fourth step of the ladder at the time of his fall. See, e.g., ¶¶ 28, 31. At the August 1, 2018 *Daubert* hearing, counsel rehashed the factual dispute by reading portions of Mr. Mercurio's deposition testimony into evidence. However, as the Court stated in its motion for summary judgment opinion, a review of the deposition

transcript reveals that Mr. Mercurio did not recall with certainty on which step he stood. Doc. 30 at 3-4 (quoting Doc. 27-1 at 64-65). This remains a significant issue of fact, since Mr. Fournier found that during testing conducted on an exemplar ladder, “the ladder did not move when [the lab technician] reached the 3rd step … [but] the ladder *did* move when he reached the fourth step.” *Id.* (quoting Doc. 27-2 at 7). See also August 1, 2018 *Daubert* Hearing Transcript (hereinafter “*Daubert* Hrg. Tr.”) at 39-40 (Fournier testifying that “[w]hen the ladder user went to the third step and made a weight shift, nothing happened in the way of the feet, and then, at the fourth step with the ladder, the shift of the weight, the ladder did tip to the ladder leg that was up…[the user was] able to climb to the third step and it appeared to be stable, and then on the -- fourth -- climbing to the fourth step and making a weight shift, the ladder made a minor tipping action”).

In his report, Fournier opined that the ladder suffered a design defect because it demonstrated an ability to move into “an unstable three-point of contact position” while a user is on the ladder, causing it to move unexpectedly. Doc. 27-2 at 12-13. This “ability to move unintentionally during the mounting of the stepladder made it defective, unfit for ordinary use, and unreasonably dangerous in a manner that was a cause of Mr. Mercurio’s fall and injuries.” *Id.* Fournier proposed an alternative design for the ladder by adding “stiffener connections to the spreader assembly” of the ladder, which would reduce “the potential for the stepladder to move into unstable and dangerous three-point positions.” *Id.* at 13. In reaching these conclusions, Fournier conducted two types of ANSI [American

National Standards Institute] design verification tests: a racking (i.e. flexibility) test and a torsional stability test. *Id.* at 5. Both tests on the subject ladder complied with ANSI standards. Fournier also performed a test he designed, called a “simulated use test,” where he “attempted to duplicate, as closely as possible, a staged work activity where the ladder user activities could be viewed simultaneously with the position of the ladder feet.” *Id.* The test essentially comprised of Fournier’s lab technician climbing onto an exemplar ladder five times in a simulated environment, and videotaping the ladder’s movements. *Id.* at 6. During testing of the subject ladder, the ladder moved into three point contact in all five tests. *Id.* The technician then climbed on a ladder modified with Fournier’s proposed design modification five times. *Id.* The ladder moved into three-point contact in two of the five tests. *Id.* At the *Daubert* hearing, videotapes of these tests were offered into evidence; however, the tapes only contained four recorded tests of the modified design, not five. Fournier testified at the hearing that he is not certain what happened with the videotapes, but that he is certain that his lab technician performed five dynamic in-use tests on his modified design. *Daubert* Hrg. Tr. at 52.

Further, Fournier testified at the hearing, consistent with his deposition testimony, that while his dynamic testing did not have a written protocol, he did give his lab technician verbal instructions. *Id.* at 38 (Fournier testifying “[t]here was not a written protocol,” and that “[t]here was a verbal protocol”). He instructed his lab technician to “use two cameras to video, one on the ladder feet and one on the ladder user. Ultimately, we’re going to have a

split screen set up so that we could have both the ladder foot movement and the ladder user movement on the screen at the same time, so they could see if there was a reference to what a ladder user was doing, at the time of the ladder foot movement." *Id.* at 38-39. At the hearing, Plaintiff introduced the video recordings into evidence, which showed, consistent with Fournier's testimony, a "split screen" displaying both the ladder user's movements and a close-up of the rear ladder feet.

At the hearing, Fournier testified that he did not videotape the ANSI racking test and the torsional stability test. See *Daubert* Hrg. Tr. at 47-48. In his report, Fournier opined that mere compliance with ANSI standards is insufficient, because they represent "minimum standards" and "do not accurately reflect the forces and loading conditions imposed on a ladder under the conditions that Mr. Mercurio was imposing to the stepladder at the time of his fall." Doc. 27-2 at 10. Fournier further opined that had Defendant "performed certain simulated use tests, such as the testing [he] performed, [Defendant] would have known that the ladder can achieve unsafe conditions and that these unsafe conditions can cause ladder users to fall and be injured," though his only basis for this conclusion appears to be that he "had not been provided any evidence that [Defendant] conducts any testing above and beyond those called [for by] the ANSI standards." *Id.* at 11. No evidence was presented at the *Daubert* hearing as to whether Defendant conducted simulated use tests in designing or manufacturing the ladder at issue.

At the *Daubert* hearing, two peer-reviewed articles were submitted into evidence,

both of which referenced the use of simulated use or “dynamic” testing. *Daubert Hrg. Exs.*

D, E. The first article described its “dynamic” testing methodology as follows:

Tests and Analyses. The analyses and testing of these ladders was accomplished in two stages. The first stage was to determine the ladders’ test responses to the ANSI “racking test” and Type II racking. The second stage involved static and dynamic analyses associated with ladder setup and elevated fourth leg impact....

Dynamic Racking Motion. Post-Type II dynamic racking instability was investigated analytically for initial conditions set to match those of the 30 lb (133.4 N) Type II racking load after a 150 lb (68 kg) climber had reached the first step ...The climber was then assumed to climb up the ladder. While on the sixth step of the 8 ft ladder, the climber’s weight was made to cross over the diagonal stability line, which caused the ladder to shift and land on the previously raised leg.

R.M. Obert et al., *A Hidden Stepladder Hazard (Excessive Twist Flexibility)*, Proceedings of the Human Factors and Ergonomics Society 47th Annual Meeting (hereinafter “Obert, *Hidden Stepladder*”), at 2-3 (2003). The second article described its methodology for dynamic testing as follows:

Dynamic testing (harnessed climber) During the dynamic ladder testing, a harnessed test subject (one of the authors) climbed a 6 ft metal ladder ... These experiments were used to verify the analytical dynamic results and to study the interaction between the user and the ladder during a centre of gravity crossover eventTo carry out each experiment, the harnessed climber ascended the first step of the ladder and applied a hand force to the right side rail, thereby initiating a three-leg stability condition. The climber then continued ascending, in a normal manner, to the third or fourth step. Upon reaching the appropriate step, the climber placed his entire weight on his right foot, which was located near the right side rail. This shifted the climber’s weight over the diagonal stability line and the ladder moved suddenly. Once the ladder crossover motion was initiated, the climber attempted to maintain and regain his balance. Video and accelerometer data of the resulting climber and ladder fall motions were captured and analyzed.

K.J. Seluga et al., *Analysis and Testing of a Hidden Stepladder Hazard—Excessive Twist Flexibility*, INT'L JOURNAL OF INJURY CONTROL AND SAFETY PROMOTION (hereinafter “Seluga, *Analysis and Testing*”), at 219 (2007). While not identical, these methodologies described above appear to be similar to that used by Fournier in this case. Finally, for purposes of this motion, Defendant conceded that it “does not contest the qualifications of Mr. Fournier,” but rather, argues that his methodology is unscientific and does not fit the facts of the case. Doc. 21 at 7 n. 6. The only witness that testified at the *Daubert* hearing was Fournier, who was subject to both direct and cross-examination on his testing methodology.

II. STANDARDS OF REVIEW

In a motion in limine, the court “rule[s] in advance of trial on the admissibility and relevance of certain forecasted evidence.” *United States v. Tartaglione*, 228 F. Supp. 3d 402, 406 (E.D. Pa. 2017). A court may exercise its discretion to rule in limine on evidentiary issues “in appropriate cases.” *In re Japanese Elec. Prods. Antitrust Litig.*, 723 F.2d 238, 260 (3d Cir. 1983), *rev’d on other grounds sub nom. Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 106 S. Ct. 1348, 89 L. Ed. 2d 538 (1986). Nevertheless, a “trial court should exclude evidence on a motion in limine only when the evidence is clearly inadmissible on all potential grounds.” *Tartaglione*, 228 F. Supp. 3d at 406. “[I]n limine rulings are not binding on the trial judge, and the judge may always change his mind during the course of a trial.” *Ohler v. United States*, 529 U.S. 753, 758 n.3, 120 S. Ct. 1851, 146 L. Ed. 2d 826 (2000).

Further, while motions in limine may serve as a useful pretrial tool that enables more in-depth briefing than would be available at trial, a court may defer ruling on such motions “if the context of trial would provide clarity.” *Frintner v. TruePosition*, 892 F. Supp. 2d 699, 707 (E.D. Pa. 2012). Indeed, “motions in limine often present issues for which final decision is best reserved for a specific trial situation.” *Walden v. Georgia-Pacific Corp.*, 126 F.3d 506, 518 n.10 (3d Cir. 1997). Thus, certain motions, “especially ones that encompass broad classes of evidence, should generally be deferred until trial to allow for the resolution of questions of foundation, relevancy, and potential prejudice in proper context.” *Leonard v. Stemtech Health Scis., Inc.*, 981 F. Supp. 2d 273, 276 (D. Del. 2013). Moreover, “*pretrial* Rule 403 exclusions should rarely be granted... [A] court cannot fairly ascertain the potential relevance of evidence for Rule 403 purposes until it has a full record relevant to the putatively objectionable evidence.” *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 859 (3d Cir. 1990) (emphasis in original).

III. ANALYSIS

Federal Rule of Evidence 702, which governs the admissibility of expert witnesses, provides that a witness may be qualified as an expert in a relevant field if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. "Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit." *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (citing *In re Paoli Railroad Yard PCB Litigation*, 35 F.3d 717, 741-43 (3d Cir.1994)). "Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to [Federal Rule of Evidence] 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993).

Daubert's reliability analysis requires a Court to consider, among other things: "(1) whether a method consists of a testable hypothesis; (2) whether the method has been subjected to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the methods have been put." *In re Paoli*, 35 F.3d at 742 n.8. However, *Daubert* did not set out a definitive checklist or test, and no single factor was deemed dispositive. *Daubert*, 509 U.S. at 593. The inquiry's "overarching subject is the scientific validity and thus the evidentiary relevance and reliability - of the principles that underlie a proposed submission." *Id.* at 594-595. "The focus, of course, must be solely on principles and methodology, not on the conclusions that they

generate.” *Id.* “[T]he reliability analysis applies to all aspects of an expert’s testimony: the methodology, the facts underlying the expert’s opinion, [and] the link between the facts and the conclusion.” *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 291 (3d Cir. 2012) (quoting *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 155 (3d Cir. 1999)). The expert’s testimony must also “fit,” in that it must assist the trier of fact.” *Oddi v. Ford Motor Co.*, 234 F.3d 136, 145 (3d Cir. 2000) (quoting *In re Paoli*, 35 F.3d at 744). The *Daubert* standard “is not intended to be a high one, nor is it to be applied in a manner that requires the plaintiffs ‘to prove their case twice—they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of evidence that their opinions are reliable.’” *Id.* (quoting *In re Paoli*, 35 F.3d at 744).

Here, Defendant “does not contest the qualifications of Mr. Fournier” for purposes of Rule 702, but rather, argues that his methodology is unreliable and does not fit the facts of the case. Doc. 21 at 7 n. 6. Additionally, Defendant does not take issue with Fournier’s use of ANSI tests. In this case, Fournier performed the ANSI racking and torsional stability tests on an exemplar ladder, and a modified ladder incorporating his proposed design, which added “stiffener connections to the spreader assembly” of the ladder. Doc. 27-2 at 14. Fournier found that his design modification would reduce “the potential for the stepladder to move into unstable and dangerous three-point positions.” *Id.* For the ANSI racking test, the exemplar ladder moved 12.5 inches during Fournier’s testing, which complied with ANSI

requirements of “14.50 inches maximum limit permitted by the ANSI A14.5-2000 standard.”

Id. at 6. The modified design moved only 2.25 inches, leading Fournier to opine that “the stiffener plates do substantially reduce the amount of racking movement, but still affords a level of flexibility necessary to position four feet on an imperfect supporting surface.” *Id.* With respect to the ANSI torsional stability test, Fournier found that the exemplar ladder only moved 0.25 inches, so he chose not to “conduct a test on the modified ladder as the unmodified ladder only moved slightly.” *Id.*

Instead of challenging Fournier’s ANSI testing, Defendant primarily focuses on Fournier’s dynamic testing, in which a lab technician videotaped himself climbing onto an exemplar ladder five times, and then a ladder with the modified design five times. Fournier, who was not present during the testing, subsequently observed the ladder’s movements from videotaped recordings. *Id.* at 6. In his report, Fournier described his methodology as follows:

The tests were conducted under my supervision. Bret Johnson was the principal laboratory tester. The testing took place [in] our laboratory. The exemplar stepladder was set up on a concrete floor with the rear legs positioned against a piece of 2 x 6 wood to simulate the riser above the landing. Two video cameras were set up to record the results of the testing program; one camera was set to view the position of the stepladder feet while the second was set to view the stepladder user movements.

Id. at 7. While the report does not state whether the technician was asked to shift his weight while on the ladder, Fournier testified at the *Daubert* hearing that the technician did shift his weight while on the ladder, presumably in accordance with the testing protocol:

Q: Mr. Fournier, when [the videotaped test is] being played, you can describe what was shown.

(At this time a video clip was played.)

A: This is showing the unmodified ladder ... basically, we perform five tests, and the user basically went up -- mounted the ladder When the ladder user went to the third step and made a weight shift, nothing happened in the way of the feet, and then, at the fourth step with the ladder, the shift of the weight, the ladder did tip to the ladder leg that was up. So you, basically, get five conditions where you had three-point contact. You were able to climb to the third step and it appeared to be stable, and then on the -- fourth -- climbing to the fourth step and making a weight shift, the ladder made a minor tipping action.

...

A. Right, we basically had three points of contact during the mounting of the ladder, and that when the ladder user went to the third step and made a weight shift, there was no change in the ladder configuration. When you get to the fourth step and made a weight shift, the ladder tipped and, basically, created the unstable ladder condition.

Daubert Hrg. Tr. at 39-41. This testimony is consistent with Fournier's report, which stated that the exemplar ladder moved into three point contact in all five tests when the technician reached the fourth step of the exemplar ladder. Doc. 27-2 at 7. In the tests with the proposed design modification, however, the modified ladder moved into three-point contact in two of the five tests when the technician was on the fourth step. *Id.* See also *Daubert* Hrg. Tr. at 42 (testifying that during the testing of the modified ladder, "instead of having five times developing three-point contact, we only had two points of three-point contact").

In its previous opinion, the Court reserved judgment on the motion in limine pending a *Daubert* hearing, but noted its reservations about Fournier's dynamic test, including the "limited sample size (five tests for each design) [which] falls far short of that required for meaningful statistical significance in the testing results"; the fact that "Fournier's report

offers no comparison of size, weight, or other factors between the technician and Mr. Mercurio"; the fact that at deposition, Fournier testified that he is "not aware" of any industry standards governing the testing he conducted in this case; the fact that he did not "personally participate in the testing conducted in this case, but instead, observed videotapes of the tests 'after the fact"'; and the fact that the videos purportedly "did not capture the full picture of the ladder or the full height of the user." Doc. 30 at 13-14.

At the *Daubert* hearing, Plaintiff addressed some of the Court's concerns above, including offering a height and weight comparison between technician and Mr. Mercurio through Fournier's testimony:

Q. Now, the individual performing the simulated use test was Mr. Johnson. Did you consider, as part of your protocol, Mr. Mercurio, for example, his height and weight?

A. Yes.

Q. Explain that to the Court.

A. Mr. Mercurio, basically, I think, is 5'11 1/2" and weighed between 220, 230 [pounds], somewhere in that ballpark. Mr. Johnson is, I'm going to guess, around 6'1" or thereabouts height wise, and his weight range is, like, 180 to 190 [pounds]. Similar in nature. His weight was slightly under Mr. Mercurio's weight, but if I were to do it, I would have been substantially heavier than Mr. Mercurio and might have been called into contention as to the excessive weight, if you would, relative to Mr. Mercurio. So I determined that the weight of a lighter person would be -- if the conditions could occur under a lighter weight, they would occur under a heavier weight. Basically, what you're doing is, essentially, creating a weight shift, and if the weight shift creates ladder movement with a lighter person, that same weight shift with a heavier person is just going to create the weight and shift the ladder easier.

Daubert Hrg Tr. at 42-43. As stated above, Plaintiff also introduced the videotape recordings into evidence, which showed a split screen between the technician climbing on

the ladder and a magnified focus on the rear legs of the ladder, in order to show whether the legs moved off the ground in a more noticeable way. However, as Defendant's briefing had suggested, the videotapes do not capture the full height of the technician or his arm movements, if any. Furthermore, during the hearing, Fournier admitted that the selected sample size for the tests was "somewhat arbitrary." *Id.* at 41 ("Q. Mr. Johnson is shown going on the ladder five times? A. Correct. Q. Why was that number selected? A. Basically, it's somewhat arbitrary, if you would, but it's more than one. Also, basically, [it] showed that there was a duplication or repeatability of the condition.").

Nevertheless, the Court finds that Fournier's dynamic testing methodology is sufficiently reliable to present to a jury. First and most importantly, the entirety of the testing process is captured on videotape, and the methodology is sufficiently simple that the videotapes would be easy to understand by a layperson. In *Riani v. Louisville Ladder, Inc.*, 2010 WL 2802040, at *9 (D. Mass. July 14, 2010), an analogous case involving a plaintiff falling from a stepladder, a federal court found Fournier's "dynamic simulated use testing" to withstand Rule 702 scrutiny, at least in part due to the fact that the testing process is viewable at trial. In *Riani*, Fournier used a similar methodology where "each of [the] combinations [of designs] was tested five times." *Id.* at *8. The *Riani* court found the fact that the tests were videotaped and can be readily evaluated by a jury to weigh in favor of admission. *Id.* at *9 (finding that "the form of the test was relatively simple" and that "significantly, the tests were recorded by video," which meant that "the jury can readily

comprehend the nature of the test, and compare it to the facts as relayed by the witnesses" when viewing the videotapes). The Court agrees that the fact that the videotapes would be available at trial weighs heavily in favor of admission, since the jury would be able to make a first-hand determination as to how much weight to accord Fournier's findings based on their own interpretation of the tapes.

Second, the *Riani* court found that Fournier's testing methodology could be readily evaluated by the opposing expert in the case, Michael Van Bree. *Id.* (finding that because there are videotapes of Fournier's tests, "[t]he opposing expert can thus evaluate the test precisely as it was performed. Indeed, the opposing expert can show the test to the jury and explain in detail why it does not fit the facts of the case or is otherwise not meaningful"). Although Defendant did not offer testimony by an opposing expert at the *Daubert* hearing, Defendant's statement of facts in its motion for summary judgment did reference Mr. Van Bree (the same expert in *Riani*) as the "defense expert" and even noted that he had created an expert report in this case. See, e.g., Doc. 18 ¶¶ 23, 25, 44. Furthermore, Defense counsel also mentioned Mr. Van Bree during their cross-examination of Fournier at the *Daubert* hearing. *Daubert* Hrg. Tr. at 60 ("Q. Are you aware of who the current Chair of the ANSI-A14.5 committee is? A. I'm not sure, but I believe, as I recall, possibly, Mr. Van Bree. Q. Mr. Van Bree, the Defense expert in this case; correct? A. Yes. Q. Are you aware that Mr. Van Bree, for a number of years, worked at Louisville Ladder, before becoming an independent expert? A. I believe that to be the case, yes."). Thus, although the Court has

not been presented with the contents of the defense expert's opinion at this time, it appears that Defendant would be able present an opposing expert to challenge Fournier's methodology during trial should it choose to do so. See generally *United States v. Velasquez*, 64 F.3d 844, 852 (3d Cir. 1995) (holding that opposing expert's testimony should have been admitted because it "would have assisted the jury in determining the proper weight to accord [government expert's] testimony."); *United States v. Mitchell*, 365 F.3d 215, 247 (3d Cir. 2004) (noting that "Velasquez announces a parity principle: If one side can offer expert testimony, the other side may offer expert testimony on the same subject to undermine it, subject, as always, to offering a qualified expert with good grounds to support his criticism.").

Third, it appears that similar methodology to that employed by Fournier has been used by researchers in peer reviewed articles. Both peer reviewed articles introduced at the *Daubert* hearing involved simulation of ordinary use, during which a ladder user climbed onto the ladder for an unspecified number of times, as well as observational analysis of the ladder's movements. For example, both the Seluga and Obert articles used weight shifting as a means to test potential ladder movement. Compare Obert, *Hidden Stepladder*, at 3 (describing the dynamic testing as an user climbing up the ladder, and "on the sixth step of the 8 ft ladder, the climber's weight was made to cross over the diagonal stability line, which caused the ladder to shift and land on the previously raised leg") and Seluga, *Analysis and Testing*, at 219 (describing the test as having a climber ascending on the stepladder, and

"[u]pon reaching the appropriate step, the climber placed his entire weight on his right foot, which was located near the right side rail," and noting that the test was videotaped), *with Daubert* Hrg. Tr. at 39-40 (Fournier testifying that his testing of the exemplar ladder showed that "when the ladder user went to the third step and made a weight shift, there was no change in the ladder configuration. When you get to the fourth step and made a weight shift, the ladder tipped and, basically, created the unstable ladder condition").

These peer reviewed articles also conclude, as Fournier did, that the industry standards promulgated by ANSI are so minimal that they do not sufficiently address the potential risks of ordinary stepladder usage. For example, the Obert article found that:

The current ANSI test specifications appear too lax to eliminate or reduce the likelihood of an inferior ladder reaching the consumer and a reduction of 50% in racking deflection permitted by the standards should be considered. Furthermore, the standards provide no additional protection from the date the standards were promulgated (1970s) to the present, because almost all ladders from that [time] could pass the current standards.

Obert, *Hidden Stepladder* at 5. Similarly, the Seluga article concluded that

Based on dynamic testing, a vertical rear leg lift of as little as 2.5 cm (1 inch) is sufficient to cause a ladder user to fall upon crossover. This scenario is consistent with many investigated accidents and offers a likely explanation for stepladder fall accidents when there is no obvious cause ... In light of [this study's] results and the lack of any documented rationale for the current [ANSI] type I racking test requirements, the present authors conclude that the current ANSI stepladder racking standards should be re-evaluated and modified to more adequately protect users from type II-related racking hazards. Furthermore, the argument that a ladder that meets ANSI standards can only be involved in an accident through misuse has no scientific basis.

Seluga, *Hidden Stepladder*, at 223. Likewise, Fournier opined in his report that ANSI only promulgated “minimum standards,” which “do not accurately reflect the forces and loading conditions imposed on a ladder under the conditions that Mr. Mercurio was imposing to the stepladder at the time of his fall.” Doc. 27-2 at 10. Thus, it appears that Fournier’s methodology and observations are similar to those from peer reviewed articles. The Court notes that one difference between Fournier’s testing in this case and the articles is the lack of a safety harness used during testing. Contrary to the Seluga article, which referenced use of a harness, and the *Riani* case, where Fournier himself provided “a safety harness” to the ladder user during dynamic testing, Fournier did not mention use of a harness in either his report or his testimony in this case. However, the Court does not find the lack of a safety harness to be a salient factor in determining the reliability of Fournier’s methodology. Though the use of a harness may have improved the safety conditions of the lab technician, it has no bearing on whether the testing accurately simulates ordinary use of a stepladder during everyday activities. Doc. 27-2 at 5 (Fournier’s report stating that his “simulated use test” is meant “to duplicate, as closely as possible, a staged work activity where the ladder user activities could be viewed...”).

Finally, the Court notes that in this case, Fournier’s opinions concern a relatively narrow issue, that is, whether, notwithstanding conformity with ANSI standards, Defendant’s current design of the ladder presents risks of going into three-point contact and creating instability through ordinary use. His dynamic in-use testing analyzes just that—that is,

whether use of the ladder, demonstrated by a technician climbing onto the ladder and shifting his center of gravity, can create unstable ladder leg movement. Because the issue is relatively well-defined and the testing process would be readily comprehensible to a jury, Fournier's dynamic testing, though simplistic in nature, is nevertheless sufficiently reliable to justify admission at trial. See *Yarchak v. Trek Bicycle Corp.*, 208 F. Supp. 2d 470, 500-01 (D.N.J. 2002) (finding that an engineering expert's "reliance on visual or tactile inspection and his own specialized expertise is sufficiently reliable in light of the nature of the issue on which he proposes to opine, the relatively narrow scope of his testimony, and his particular field of expertise," and noting that "unlike laboratory or medical testing, which employ rigorous and replicable protocols, technical fields such as engineering often involve more idiosyncratic methods of design and testing"); *United States v. Gatson*, -- Fed. App'x. --, 2018 WL 3773662, at *3 (3d Cir. Aug. 9, 2018) (affirming district court's finding that expert's testimony was reliable "because the data he imparted had been admitted by other courts on numerous occasions, widely accepted across the country...and the scope of the testimony was sufficiently narrow") (internal quotation marks omitted).

Besides challenging Fournier's methodology, Defendant also argued in its motion that his test "do not fit the facts of the case" because his test involved a "technician climb[ing] the ladder and mov[ing] on it to try to make one of the feet come off the ground," which "bear no relationships to Mr. Mercurio's use of the ladder at the time of the accident." Doc. 21 at 9. However, as discussed above, the peer reviewed articles show that

researchers in Fournier's field employ similar methodologies as that of Fournier, and that these tests were conducted in order to analyze the risks of falling from stepladders. In this case, Mr. Mercurio alleges claims of negligence and strict liability due to a design defect relating to his use of Defendant's ladder in the ordinary course. See Doc. 18 ¶¶ 3, 7, 28-33 (Defendant's Statement of Facts agreeing that on April 29, 2014, Mr. Mercurio fell off an 8 foot fiberglass stepladder; that the ladder was manufactured by Defendant; and that on the day of the incident, Mr. Mercurio climbed on the ladder three times in order to replace a light fixture). Defendant insists that Fournier's testing did not "fit" the facts of the case because Mr. Mercurio purportedly testified that he was on the third step of the ladder when he fell while Fournier "assumed that Mr. Mercurio was on the fourth step of the ladder at the time of the incident." Doc. 21 at 11. However, as this Court already found in its previous opinion, Mr. Fournier expressed uncertainty at his deposition as to which step on which he stood. Doc. 30 at 3-4 (quoting Doc. 27-1 at 64-65). Despite the Court's findings, defense counsel continued to litigate the factual issue at the *Daubert* hearing, attempting to argue that Mr. Mercurio was on the third step of the ladder by selectively reading portions of Mr. Mercurio's deposition testimony during cross-examination of Fournier. See, e.g., *Daubert* Hrg. Tr. at 82-87. However, the Court will not usurp the jury's role by resolving an outstanding factual issue on the strength of Mr. Mercurio's ambiguous deposition testimony. Furthermore, "[m]ere weakness in the factual basis of an opinion bears on the weight of the evidence, not its admissibility." *Burke v. TransAm Trucking, Inc.*, 617 F. Supp. 2d 327, 335

(M.D. Pa. 2009) (citing *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797, 801 (6th Cir.2000)).

"Those arguments are more appropriate for the jury." *Id.* Thus, to the extent that Defendant's argument depends on resolution of the factual issue of whether Mr. Mercurio stood on the third or fourth step at the time of his accident, such an argument does not warrant the wholesale preclusion of Fournier's testimony.

Defendant also objects that Fournier's testing was "performed without a written protocol." Doc. 21 at 9. See also *Daubert* Hrg. Tr. at 92 (eliciting testimony from Fournier that he has not prepared a written protocol for his dynamic use test). But as the Court stated in its previous opinion, "the fact that there is no written protocol does not have significant impact on the soundness of Fournier's methodology, especially where, as here, Fournier testified that he gave his lab technician 'verbal protocols.'" Doc. 30 at 13 (quoting Doc. 18-10 at 16). At the hearing, Fournier testified that he verbally instructed his lab technician that "we were going to use the procedure as we used with the *Riani* [case's] testing, with minor modifications...we're going to use two cameras to video, one on the ladder feet and one on the ladder user. Ultimately, we're going to have a split screen set up so that we could have both the ladder foot movement and the ladder user movement on the screen at the same time, so they could see if there was a reference to what a ladder user was doing, at the time of the ladder foot movement." *Daubert* Hrg. Tr. at 38-39. While the Court finds Fournier's testimony of his verbal instructions to be somewhat wanting in terms of step-by-step precision, there is no dispute that the instructions were sufficiently clear for

the technician to perform the tests and capture the process through video recording. At the *Daubert* hearing, the videotapes clearly demonstrated when the ladder's legs moved into three-point contact.

Defense counsel also highlighted the fact that the videotapes did not show the technician's arm movements while cross-examining Fournier. *Daubert* Hrg. Tr. at 48 ("Q. You'll agree with me, sir, that in both of the videos that we saw today, you cannot see above the level of the fifth step on the ladder; correct? A. Correct."). However, the Court finds that such challenges can be adequately explored through cross-examination at trial when the jury is able to view the videotapes themselves. See *In re Paoli*, 35 F.3d at 744-45 ("A judge frequently should find an expert's methodology helpful even when the judge thinks that the expert's technique has flaws sufficient to render the conclusions inaccurate."); *Hartle v. FirstEnergy Generation Corp.*, 7 F. Supp. 3d 510, 522 (W.D. Pa. 2014) ("That Method 17 is not EPA-approved ... is evidence that it may not be the best testing protocol, but *Daubert* does not require the 'best' methodology or data.") (citing *In re Paoli*, 35 F.3d at 744); *David v. Black & Decker Inc.*, 629 F. Supp. 2d 511, 516 (W.D. Pa. 2009) ("Although both experts could have done more and their opinions may be vulnerable on cross-examination, this does not render their methodology patently unreliable. As with the qualifications prong, 'the standard for determining reliability is not that high, even given the evidentiary gauntlet facing the proponent of expert testimony under Rule 702.'") (quoting *In re TMI Litig.*, 193 F.3d 613, 665 (3d Cir.1999)).

While the Court continues to harbor certain reservations regarding aspects of Fournier's methodology, such as the fact that the number of tests were limited to five for each type of ladder tested, and the fact that the videos did not record the upper body movements of the lab technician, these reservations can be adequately addressed through an effective cross-examination, and the jury, as the ultimate factfinders, would be perfectly able to determine for itself the weight to be accorded to Fournier's findings with the aid of the videotape recordings. As the Third Circuit has stated, “[s]o long as the expert's testimony rests upon 'good grounds,' it should be tested by the adversary process ... rather than excluded from jurors['] scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.” *In re TMI Litig.*, 193 F.3d at 692 (quoting *Ruiz-Troche v. Pepsi Cola of P. R. Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998)). The axiomatic principle under *Daubert* remains that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Karlo v. Pittsburgh Glass Works, LLC*, 849 F.3d 61, 83 (3d Cir. 2017) (quoting *Daubert*, 509 U.S. at 596). See also *Ponzini v. PrimeCare Med., Inc.*, 269 F. Supp. 3d 444, 569 (M.D. Pa. 2017) (noting that “[t]he PrimeCare Defendants were able to cross-examine Nurse Wild and undermine her opinion” at trial and that defendants' post-trial motion's arguments “about Nurse Wild's opinion go to weight, not to admissibility, of her testimony”).

Accordingly, the motion in limine will be denied. This ruling will be without prejudice to counsel's ability to challenge Fournier's methodology and conclusions through cross-examination, object to Fournier's testimony in accordance with the Federal Rules of Evidence, or question his testimony through other appropriate means at trial. In other words, the Court's ruling does not mean that Fournier's conclusions should be deemed as correct. At trial, Defendant will have the opportunity to demonstrate why such conclusions should not be credited or given substantial weight. However, at this stage, the Court is satisfied that Fournier's methodology is sufficiently reliable to be presented to a jury.

IV. CONCLUSION

For the reasons outlined above, Defendant's motion in limine to preclude Mr. Fournier (Doc. 20) will be denied without prejudice. A separate Order will follow.



Robert D. Mariani
United States District Judge